CLAIMS

1. A chip bin having an upper part through which chips are arranged to fall freely from an inlet and a lower part within which chips are arranged to remain until they are removed by a feeding device downstream, comprising:

steam orifices arranged to strike chips falling from said inlet with steam and thereby to disperse said chips over the interior of said chip bin.

2. A chip bin according to claim 1, comprising upwardly angled steam orifices arranged to direct steam upward at said chips and thereby to delay the falling of the chips.

3. A chip bin according to claim 2, comprising steam orifices angled tangentially.

4. A chip bin according to claim 1, comprising at least one conical baffle projecting from a wall of said bin to guide the falling chips away from the wall of the bin, and steam orifices disposed below said at least one baffle and arranged to direct steam at chips falling past said baffle.

5. A chip bin according to claim 4, further comprising an exhaust pipe arranged to extract gases from a space under said at least one baffle.

6. A chip bin according to claim 1, comprising at least two treatment zones through which said chips fall successively, each with steam orifices arranged to direct steam onto said falling chips.

7. A chip bin according to claim 1, comprising a temperature sensor arranged to monitor the temperature of chips in said lower part of said chip bin and to regulate the supply of steam to said upper part of said chip bin in order to regulate said temperature.

8. A chip bin according to claim 1, further comprising a source of cooking liquor arranged to supply said cooking liquor into said lower part of said chip bin.

9. A chip bin having an upper part through which chips are arranged to fall freely from an inlet and a lower part within which chips are arranged to remain until they are removed by a feeding device downstream, comprising:

steam orifices arranged to supply steam to said upper part of said chip bin; and

a temperature sensor arranged to monitor the temperature of chips in said lower part of said chip bin and to regulate the supply of steam to said upper part of said chip bin in order to regulate said temperature.

10. A chip bin having a tapered lower part from which chips are arranged to be removed through an outlet at the bottom of said tapered part, comprising:

steam orifices positioned to direct steam downward along the surface of said tapered part within said chip bin.

11. A chip bin according to claim 10, further comprising a sensor arranged to detect flow of chips towards said outlet, and to increase the rate of flow of steam through said steam orifices when said sensor indicates a lack of normal flow of said chips.

12. A chip bin according to claim 11, further comprising additional steam nozzles in said tapered part arranged to supply steam only when said sensor indicates a lack of normal flow of said chips.

13. A chip bin having a lower part which is arranged to be filled with chips to be fed to a digester, comprising:

a source of cooking liquor arranged to supply said cooking liquor into said lower part of said digester.

14. Apparatus for digesting wood chips to produce pulp, comprising:

a digester; and

a chip bin having a lower part within which chips are arranged to remain until they are transferred to said digester, the chip bin having an upper part through which chips are arranged to fall freely from an inlet to said lower part, and including steam orifices arranged to strike chips falling from said inlet with steam and thereby to disperse said chips over the interior of said chip bin.

15. Apparatus according to claim 14, wherein said chip bin comprises upwardly angled steam orifices arranged to direct steam upward at said chips and thereby to delay the falling of the chips.

16. Apparatus according to claim 15, wherein said chip bin comprises steam orifices angled tangentially.

17. Apparatus according to claim 14, wherein said chip bin further comprises at least one conical baffle projecting from a wall of said bin to guide the falling chips away from the wall of the bin, and steam orifices disposed below said at least one baffle and arranged to direct steam at chips falling past said baffle.

18. Apparatus according to claim 17, wherein said chip bin further comprises an exhaust pipe arranged to extract gases from a space under said at least one baffle.

19. Apparatus according to claim 14, wherein said chip bin comprises at least two treatment zones through which said chips fall successively, each with steam orifices arranged to direct steam onto said falling chips.

20. Apparatus according to claim 14, wherein said chip bin further comprises a temperature sensor arranged to monitor the temperature of chips in said lower part of said chip bin and to regulate the supply of steam to said upper part of said chip bin in order to regulate said temperature.

21. Apparatus according to claim 14, further comprising a source of cooking liquor for said digester, wherein said source is arranged to supply said cooking liquor into said lower part of said chip bin.

22. Apparatus for digesting wood chips to produce pulp, comprising:

a digester; and

a chip bin having a lower part within which chips are arranged to remain until they are transferred to said digester, said chip bin having an upper part through which chips are arranged to fall freely from an inlet to said lower part, and including:

steam orifices arranged to supply steam to said upper part of said chip bin; and

a temperature sensor arranged to monitor the temperature of chips in said lower part of said chip bin and to regulate the supply of

steam to said upper part of said chip bin in order to regulate said temperature.

23. Apparatus for digesting wood chips to produce pulp, comprising:

a digester; and

a chip bin having a lower part within which chips are arranged to remain until they are transferred to said digester;

said chip bin having a tapered lower part from which chips are arranged to be removed through an outlet at the bottom of said tapered part, and comprising steam orifices positioned to direct steam downward along the surface of said tapered part within said chip bin.

24. Apparatus according to claim 23, wherein said chip bin further comprises a sensor arranged to detect flow of chips towards said outlet, and to increase the rate of flow of steam through said steam orifices when said sensor indicates a lack of normal flow of said chips.

25. Apparatus according to claim 24, wherein said chip bin further comprises additional steam nozzles in said tapered part arranged to supply steam only when said sensor indicates a lack of normal flow of said chips.

26. Apparatus for digesting wood chips to produce pulp, comprising:

a digester; and

a chip bin having a lower part within which chips are arranged to remain until they are transferred to said digester;

a source of cooking liquor arranged to supply said cooking liquor into said digester.